

Patent Claims

1. Method of fabricating an amorphous or polycrystalline silicon layer consisting, in particular of silicon or silicon germanium, on an insulating region (14, 31), whereby the amorphous or polycrystalline layer (19, 33) may contain, in particular, carbon or oxygen as a diffusion inhibiting agent, **characterized by the fact that** for improving seeding a seed initiation layer (28, 32) of good seeding capacity and insulating properties is fabricated on the insulating region (14, 31) because of which during precipitation of amorphous or polycrystalline layers (19, 33) the thickness is substantially greater, the homogeneity of the precipitation is improved, the distribution of grain size in polycrystalline layers (19, 33) is more uniform and surface roughness is less than if the seeding layer (28, 32) is omitted.
2. Method of claim 1, **characterized by the fact that** an  $\text{SiO}_2$ -layer is preferably used as insulating layer (14, 31) and silicon nitride is preferably used as seeding layer (28, 32).
3. Method of claim 1 or 2, **characterized by the fact that** the seeding layer (28, 32) is applied before a differential epitaxy and thus the amorphous or polycrystalline layer (19, 33) is formed on the insulating region (14, 31) and an epitaxial layer is formed on the monocrystalline substrate (11, 30).

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